

What is claimed is:

1. A sensor, in which light beams are emitted in various directions, reflected at objects that may be present, received again and evaluated according to direction and transit time in the sense of a three-dimensional imaging of the objects,
wherein light sources (16) are arranged in the form of a two-dimensional matrix for generating the light beams.
2. The sensor as recited in Claim 1,
wherein the light sources (16) are at different distances from each other.
3. The sensor as recited in one of Claims 1 or 2,
wherein the light sources are arranged on column-shaped subassemblies.
4. The sensor as recited in one of the preceding claims,
wherein the light sources (16) are mounted as individual components on a printed circuit board (15).
5. The sensor as recited in one of the preceding claims,
wherein the individual light sources (16) are staggered in zigzag fashion, in each case within one column.
6. The sensor as recited in one of the preceding claims,
wherein the light sources (16) are controllable independently of one another.
7. The sensor as recited in one of the preceding claims,
wherein the light sources are formed by light-emitting diodes (16).
8. The sensor as recited in one of Claims 1 through 6,
wherein the light sources are formed by laser diodes.
9. The sensor as recited in one of the preceding claims,
wherein a collective lens (17) is disposed in front of each light source (16).

10. The sensor as recited in one of the preceding claims, wherein a common collective lens (13) is provided.
11. The sensor as recited in one of the preceding claims, wherein optical waveguides are provided for shaping the light beams of the individual light sources.
12. The sensor as recited in one of the preceding claims, wherein the light beams emitted by the individual light sources (16) have elliptical cross-sections.
13. The sensor as recited in one of the preceding claims, wherein an optical receiver (12, 23) having a collective lens (14) and a light-sensitive area (20, 25) is provided for receiving the beams reflected by the objects.
14. The sensor as recited in Claim 13, wherein the light-sensitive area is formed by an optoelectric receiver (20).
15. The sensor as recited in Claim 13, wherein the light-sensitive area is formed by optoelectric receivers (25) arranged in a matrix configuration.